

**Amendments to the Drawings**

Please amend Figure 1 in accordance with the following comments and as illustrated in the replacement sheet attached to this response:

Figure 1 is now labeled as “Prior Art” as requested in the office action.

## **REMARKS**

The final Office Action mailed November 10, 2008, has been received and the Examiner's comments carefully reviewed. In the present response, filed alongside a Request for Continued Examination, claims 1, 6, 10, 11, 18, 19, 24, 27, 37 and 38 are amended. Claim 36 has been canceled, and the limitations of that claim are incorporated into claim 27. No new matter has been added by way of these amendments, and claims 1-2, 6-7, 10-12, 18-21, 24-25, 27-35, and 37-45 are pending. Favorable consideration of this application is requested in view of the following remarks.

### ***Drawings***

The Office Action objects to the drawings, in particular Figure 1. The Office Action indicates that Figure 1 should be labeled "Prior Art" and that no such replacement drawing was included with the previous Office Action. The Office Action also indicates that the features of claims 1, 6, 11, 19, and 24 must be shown in the Figures or canceled from the claims. Applicants respectfully traverse the objection to the drawings, in view of the following remarks.

Regarding the objection to Figure 1, Applicants provide herewith a replacement drawing labeled "Prior Art", as requested in the Office Action. Applicants note that the previous Office Action referenced such a replacement figure as well, and conclude that the figure was inadvertently omitted from filing alongside the previous response. Applicants assert that the inclusion of this replacement figure in the present response fully responds to this objection, and therefore respectfully request reconsideration and withdrawal of this objection.

Regarding the objection to the figure with respect to claims 1, 6, 11, 19, and 24, Applicants assert that each of the features of these claims is present in the figures. In particular, examples of the features recited in these claims can be seen in the state diagram of Figure 2 (relating to the methods performed), as well as the circuit diagram of Figure 3 (regarding an example circuit in which these methods are performed). Applicants respectfully request either further guidance from the Examiner regarding any allegedly missing features of these claims, or, in the alternative, reconsideration and withdrawal of this objection.

***Claim Rejections – 35 U.S.C. § 112***

Claim 10 is objected to under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Specifically, the Office Action objects to the term “approximately” as being a relative term which renders the claim indefinite. Applicants respectfully traverse this rejection.

Although Applicants do not necessarily agree that the term “approximately” renders the claim indefinite, claim 10 is amended in the present response to remove this objected-to term. Applicants therefore respectfully request reconsideration and withdrawal of this rejection.

***Claim Rejections – 35 U.S.C. § 103***

**A. Claims 1-2, 6-7, 11-12, 19-21, and 24-25**

The Office Action rejected claims 1-2, 6-7, 11-12, 19-21, and 24-25 under 35 U.S.C. § 103(a) as being unpatentable over Cromer et al. (U.S. Patent Pub. No. 2004/0223462, hereinafter “Cromer”) in view of Overs et al. (U.S. Patent No. 6,600,755, hereinafter “Overs”). Applicants respectfully traverse this rejection.

**1. Claims 1, 6, and 11**

Independent claims 1, 6, and 11 each recite methods for selecting a data signal source, and are amended in the present response. As currently presented, each of these claims requires, among other elements, “enabling directional connection between the source and a physical interface using a biasing switch” and “monitoring the source. . .at a programmable logic device for an indication of [communication speed and/or an autonegotiation period], wherein monitoring the source includes monitoring for an indication of a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse received at the programmable logic device via a tri-state converter.” As explained from page 10, line 28 to page 13 line 6 of the patent application, tristate signals received by a physical interface can be converted for understanding by a logic device, which can then determine the speed at which the device should communicate. The biasing switches (e.g. switch 332 or 330 of Figure 3) provide a method of ensuring directional communication is correct in the link between a remote system and the physical interface, through the RJ-45 connector.

In contrast to these claims, the combination of Cromer and Overs fails to disclose either of these elements. Cromer discloses a system for autonegotiation useable in gigabit Ethernet

applications. Cromer accomplishes this by connecting a media interface to a processor in a network interface card, which determines the communication speed of the interface, and performs the autonegotiation process. Cromer, Figures 1-2. Cromer does not disclose or suggest use of a biasing switch used to enable directional communication between a source and the physical interface, and also lacks a tri-state converter used to provide signals to a programmable logic device from the physical interface. Overs also fails to disclose or suggest these elements. Overs discloses a system that operates at 10 Mbps or 100Mbps by filtering an input signal and passing a filtered input signal to separate, discrete 10Base-T and 100Base-T communication blocks, and selecting the output of one of those blocks for use. See Overs, Figure 2. Overs only discloses a single source, and therefore does not provide source selection. Overs also does not include a biasing switch for enabling directional communication, and does not include a tri-state converter used in monitoring for an indication of a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse at a programmable logic device. Therefore, neither of Cromer and Overs discloses or suggests use of either a biasing switch or tri-state converter in the manner claimed.

For at least the above reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 6, and 11.

## **2. Claims 2, 7, and 12**

Claim 2 depends from claim 1, claim 7 depends from claim 6, and claim 12 depends from claim 11. Each of these claims inherit each of the limitations of the independent claims from which they depend. Therefore, for at least the same reasons as set forth in part A.1 above, each of these claims is also not rendered obvious by the combination of Cromer and Overs.

Applicants therefore respectfully request reconsideration and withdrawal of the rejection of these claims.

## **3. Claims 19-21 and 24-25**

Independent claim 19 recites a method for a media converter to identify a pair of pins of a data jack that is carrying a data signal from a network device. In the claimed method, the media converter is defined to include “a physical interface having an input port into which the data signal from the network device is to be supplied”, “a switch interposed between the data jack and the physical interface” and “at least one biasing switch enabling a directional connection

between the physical interface and the data jack.” The claimed method requires “using the switch and the biasing switch to alternately couple the input port on the physical interface between a first pair of pins on the data jack and a second pair of pins on the data jack.” The method also includes “monitoring a pair of pins . . . wherein monitoring the pair of pins includes monitoring for a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse using a programmable logic device, the programmable logic device receiving the indication of the communication speed via a tri-state converter.”

In contrast to claim 19, the combination of Cromer and Overs fails to disclose or suggest either (1) using the switch and the biasing switch to alternately couple the input port on the physical interface between a first pair of pins on the data jack and a second pair of pins on the data jack, or (2) monitoring for a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse on a pair of pins using a programmable logic device, the programmable logic device receiving the indication of the communication speed via a tri-state converter. As previously explained above in part A.1, neither Cromer nor Overs discloses use of either a biasing switch or a tri-state converter, and both of those references establish communication speed in a manner far different from that claimed. Therefore, the combination of those references cannot render claim 19 obvious for analogous reasons.

Applicants therefore respectfully request reconsideration and withdrawal of the rejection of claim 19.

Claims 20-21 and 24-25 depend from claim 19, and therefore inherit each of the limitations of that claim. Therefore, for at least the same reasons as set forth with respect to claim 19, each of these claims is also not rendered obvious by the combination of Cromer and Overs. Applicants therefore respectfully request reconsideration and withdrawal of the rejection of these claims as well.

## B. Claims 10 and 18

The Office Action rejected claims 10 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Cromer in view of Overs, and further in view of Pickell (U.S. Patent Pub. No. 2004/0153701). Applicants respectfully traverse this rejection.

Claim 10 depends from claim 6, and claim 18 depends from claim 11. These claims therefore inherit each of the limitations of those independent claims, including, among other

elements, “enabling directional connection between the source and a physical interface using a biasing switch” and “monitoring the source. . . at a programmable logic device for an indication of [communication speed or an autonegotiation period], wherein monitoring the source includes monitoring for an indication of a normal link pulse, a multi-level tier 3 pulse, and a fast link pulse received at the programmable logic device via a tri-state converter.”

The combination of Cromer, Overs, and Pickell cannot render either of claims 10 or 18 obvious, because as explained in part A.1 above, the combination of Cromer and Overs fails to disclose or suggest use of either a biasing switch or tri-state converter in the manner claimed. Pickell also fails to disclose or suggest these elements. Pickell relates to management of redundant LAN links, using a communication link redundancy module and a terminal server for monitoring a link. See Pickell, Figure 3. Pickell lacks any disclosure or suggestion of use of a biasing switch to enable directional communication, or monitoring any of the claimed types of signals using a tri-state converter and programmable logic device. Therefore, Pickell cannot remedy the shortcomings of Cromer and Overs, and so the combination of these three references cannot render either of claims 10 or 18 obvious.

For at least this reason, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 10 and 18.

### C. Claims 27-35 and 37-45

The Office Action rejected claims 27-35 and 37-45 under 35 U.S.C. § 103(a) as being unpatentable over Cromer in view of Manzardo (U.S. Patent No. 6,127,953). Applicants respectfully traverse this rejection.

#### 1. Claims 27-35

Independent claim 27 recites a media converter that includes, among other elements, a switch coupled between a plurality of sources and a physical interface, as well as “an optical transceiver coupled to the physical interface”, “at least one biasing switch enabling a directional connection between the physical interface and a selected source from among the plurality of potential sources” and “a logic device coupled to the physical interface via a tri-state converter.” The logic device in the claim is arranged to “cause the switch to iteratively couple a first end of the switch to each of the plurality of potential data sources on a one-by-one basis, until instructed to cease such iterative coupling by the logic device; receive a signal from the physical interface,

the signal communicating a data rate at which the data signal will be communicated; and upon reception of the signal communicating the data rate at which the data signal will be communicated, instruct the switch to cease the iterative coupling.” The logic device receives a signal from the physical interface via the tri-state converter such that “the signal communicating a data rate at which the data signal will be communicated is a two-bit digital signal derived from a tri-state signal provided by the physical interface.”

In contrast to claim 27, the combination of Cromer and Manzardo fails to disclose each of the elements of this claim, including at least the claimed arrangement of the biasing switch and tri-state converter. As explained above, Cromer fails to disclose use of either a biasing switch or a tri-state converter in the manner claimed. Particularly, Cromer does not disclose that the signal communicating a data rate at which the data signal will be communicated is a two-bit digital signal derived from a tri-state signal provided by the physical interface. Manzardo also fails to disclose such an element. Manzardo relates to an optical to electrical converter, and data compression for communication in such a device. See Manzardo, Figure 7. Manzardo does not disclose either use of a tri-state converter in the manner claimed, or use of a biasing switch. Therefore, it cannot remedy the shortcomings of Cromer, and this combination of references cannot render obvious claim 27.

For at least the above reason, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 27. Claims 28-35 depend from claim 27, and therefore inherit each of the elements of that claim. Applicants assert that these claims are not rendered obvious for at least the same reasons as claim 27, and respectfully request reconsideration and withdrawal of the rejection of these claims as well.

## 2. Claims 37-45

Independent claims 37 and 38 recite a media converter and a network arrangement including such a media converter. The media converter of each of these claims requires, among other elements, “at least one biasing switch enabling a directional connection between the physical interface and the plurality of potential sources” and “a tri-state converter configured to convert a tri-state signal provided by the physical interface to a two-bit digital signal, the two-bit digital signal identifying a data rate at which the data signal will be communicated.”

In contrast to claims 37 and 38, the combination of Cromer and Manzardo fails to disclose or suggest each of these elements of the claim. Specifically, neither Cromer nor Manzardo disclose or suggest the claimed configuration including either a biasing switch or a tri-state converter, as described in part C.1, above. Therefore, this combination cannot render either of claims 37 and 38 obvious; Applicants respectfully request reconsideration and withdrawal of the rejection of these claims.

Claims 39-45 depend from claim 38, and inherit each of the limitations of that claim. These claims are not rendered obvious by the combination of Cromer and Manzardo for at least the same reasons as that claim. Applicants therefore respectfully request reconsideration and withdrawal of the rejection of these claims as well.

#### D. **Claim 36**

The Office Action rejected claim 36 under 35 U.S.C. § 103(a) as being unpatentable over Cromer in view of Manzardo, and further in view of Cam et al. (U.S. Patent No. 6,671,758, hereinafter “Cam”). Applicants respectfully traverse this rejection.

Claim 36 depends from claim 27, and therefore inherits each of the limitations of that claim. Applicants assert that claim 36 is not rendered obvious because this combination of references fails to disclose or suggest at least the claimed arrangement of the biasing switch and tri-state converter of claim 27. As recited in part C.1, above, neither Cromer nor Manzardo discloses or suggests such an element. Cam also fails to disclose either of these elements. Cam discloses a bus interface for a number of networked devices using a FIFO architecture. Cam does not relate to either a biasing switch or tri-state converter, and therefore cannot remedy the deficiencies of the combination of Cromer and Manzardo. Applicants therefore respectfully assert that claim 36 cannot be rendered obvious by this combination of references.

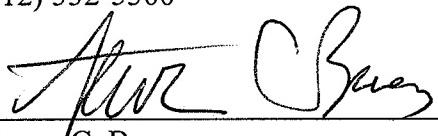
For at least this reason, Applicants respectfully request reconsideration and withdrawal of the rejection of this claim.

**Conclusion**

It is respectfully submitted that each of the presently pending claims is in condition for allowance and notification to that effect is requested. Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicant reserves the right to raise these arguments in the future. The Examiner is invited to contact Applicant's representative at the below-listed telephone number if it is believed that the prosecution of this application may be assisted thereby.

Respectfully submitted,

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